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A D D R E S S

at the

Graduating Exercises

of the

**Lowell Institute School for
Industrial Foremen**

by

HOWARD ELLIOTT
Chairman of the Board

and President of

**The New York, New Haven and Hartford
Railroad Company**



Lowell Institute, Boston, Mass.

May 26, 1915

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When I was in Washington on May 12 I received a dispatch from Mr. Lowell asking me to make a short talk to you to-night. I accepted for several reasons. One, that I am always glad to do what I can to help Mr. Lowell, who is doing so much for good education and good citizenship in this country. Another, that officially I realize the great importance of the duties and work of men who fill the positions of foremen. On the New Haven road there are nearly 1,000 such men, and the efficiency and safety of the road is influenced very largely by the kind of men they are and the way they do their work, and from among these foremen the road hopes to obtain future superintendents, master mechanics and other officers. So this school is of much interest to me individually and officially, and I am glad to have a chance to say a few words to you.

In this busy United States of ours there is a vast amount of work to be done. That work must be done by millions of individuals, and it must be directed by thousands of other individuals. In order to achieve the results all good citizens desire, namely, better living conditions for the people, and to leave the world a better place than when they came into it, it is necessary for those who work to understand that they cannot obtain the right to command until they have fully realized their duty to obey; and always to give consideration to others.

An Important Problem. Men like you should have great influence in making work successful for those that are to report to you. You should also have a marked effect in helping to solve one of the important problems of the present day—the proper relation between capital and labor, and the proper duty and function of organized labor in the complicated social system of the age. The solving of this problem calls for wisdom, tact, experience and judgment.

Capital and Labor There are certain propelling social and Unions.

industrial forces in the United States, and, no matter what place a man holds, he is associated with others, and this naturally will have an effect, good or bad, upon others. In this country there is the great force of collective effort, through which have been created the manufacturing plants, the railroads, the banks, the insurance companies, labor organizations and the Government itself. Some of these organizations have made mistakes. In the case of capital the country has corrected some of the errors made by the unions of capital, the so-called trusts. These big capital organizations have accomplished much for the welfare of the United States, but, in some directions, they perhaps went too far. The labor unions are important elements of progress, but if their leaders are not wise and not careful, and if these leaders fail to appreciate the real sentiment of the country, the people will take them in hand just as they did the capital unions and declare: "You must give due weight to the interests of the entire country; you must realize that you are part of an instrument for carrying on the work of the country; you must bear in mind that the country is greater than all." The people, in the last analysis, are the final check to prevent unfair tendencies and methods, either by capital or labor.

I hope this country will never see the terrible strikes that we have had in the last twenty-five years. I hope there will be a spirit of getting together and of reasonable discussion so that we will not witness a repetition of the old-time disastrous conflicts between labor organizations and capital organizations. There should be found a reasonable way to settle differences of opinion harmoniously in the interest of all concerned.

**Advantages of
Technical
Training.**

You should consider yourselves fortunate in being able to obtain the advantages of courses given by the Lowell Institute School for Industrial Foremen, coupled, at the same time, with practical experience and

work in your mill or factory or shop. You have in this way obtained a wider experience. You have learned some things in this school that you did not learn in the shop, and *vice versa*. I hope you have discovered also that you have much to learn and that there is always an opportunity to learn more and thus to do better work.

Graduates' Testimony. One of your graduates recently wrote about the school as follows:

"Of more permanent satisfaction to me than recognition in the form of improved position and pay is the opportunity for rendering service in new fields which the Lowell Courses have given. Formerly opportunities to be useful seemed to be limited by lack of experience. Now I recognize no limit except the capacity to learn. In other words, the school has given me not only material advantages, but new ideals. I have valued, too, the continual contact with real workers, such as the Lowell School alone gathers. Several of us who had the privilege of a college education before entering the Lowell School have agreed in private conversation that, if we were to start our careers over again, and if we knew upon leaving high school that we were to enter technical trades, we should secure a general college education and then combine technical training at the Lowell Institute with practical and more or less remunerative experience."

Another graduate says:

"The ability to consult with engineers and mechanics with the 'prestige' of a technical education, has certainly helped my advancement and I would gladly spend double the time and trouble again to gain what I did."

Still another says:

"Four years ago (when I entered the school) I

was the lowest-priced man in the shop, of which I am now Foreman, and I attribute my success principally to the training received at this school.”

Rating Men. Your work here and in the shops should help you to rate or to set an estimate upon and to handle men—one of the most difficult of all problems. An interesting paper on the subject of rating men was written recently by Dr. Katherine M. H. Blackford. In it she says:

“The subject of rating men is fraught with very great difficulties. I have encountered those difficulties, I think, in about every phase in which they could possibly be presented. If anyone who even claims to be able to analyze or rate men tells you that it is an easy matter, you may take his statement with a grain of salt. We can measure a man’s height in centimeters or inches; pounds or ounces or grams or centigrams offer us exact standards for measuring his weight, but there are no absolute standards for measuring the man himself and probably there never can be. We cannot put a man on the scales and ascertain that he has so many milligrams of good sense or so many cubic centimeters of financial ability, or so many amperes of disposition to industry. Human worth can, therefore, be measured relatively only. By the study of large groups we can ascertain approximately the average or normal.

“To know and to rate a man’s aptitudes, abilities, personality and possibilities are of the highest importance, but these cannot be rated except in relation to his work and to his environment.”

Essentials of Success. Dr. Blackford very properly insists that without health no man can do good work in any position, and she sums up a man’s physical value as follows:

“Size, endurance, strength, condition of body, predispositions, morality, sobriety and sanity.”

Under the head of character the same writer places:

“Honesty, truthfulness, loyalty, discretion, prudence, enthusiasm, courage, steadfastness and dependability.”

Under the important head of intelligence this same writer mentioned the following:

“Ability to learn, ability to understand and follow instructions, judgment, memory, observation, expression in speaking, expression in writing, imagination and reason.”

You must therefore care for yourself physically, mentally and morally in order to do your share of work in the world, and yet, with all of these, it is not likely the best success can be achieved if you are not enthusiastic and do not love your work and love to accomplish results.

**The Handling
of Men.** Mr. W. A. Grieves has written a paper, called “The Handling of Men,” and in it he says:

“No two of us may have the same idea as to the methods to be employed in handling men successfully. We may disagree as to means; but we believe we can all get together when it comes to matters of principle; and we are sure that all of us are seeking the same result—the greatest good for all concerned. In the first place (and it may sound platitudinous and academic to say it; but it is none the less true) it should be distinctly understood that there can be no successful policy of dealing with men where the spirit of confidence is lacking. Confidence is the foundation upon which harmonious relationship must be erected, and efficiency—the result we are all seeking—is nothing more than a by-product of harmony. Every employer is in business to make money—so is every employee. Both are selfish—and both should be—for without that spirit of selfishness,

which is the very basis of progress, the world would stand still. Assuming this statement to be true, the question is, how can this confidence between employer and employee be secured? I have my opinion, but it may not agree with yours. But that does not matter much. What I believe and what you believe are only incidents—mere opinions—unless we can back up our belief with something practical—something that has been tried and something that has worked—that has secured results.

“These are days of honest dealings. Men who expect to remain in business know that misrepresentations re-act, that chickens come home to roost. And men in business to-day do not recognize this necessarily for any particular moral reason, but for the scientific reason that it is good business.”

Up to Specifications. Honesty is of the greatest importance. We now know that America is sending many manufactured articles to Europe.

We have recently read a complaint that American goods are not up to standard. This is a serious criticism upon honesty and integrity. I am glad to believe that this is an isolated instance of a breach in sound business morals. A man in charge of turning out articles ought to be certain that he does good work and that “good goods” are delivered in accordance with specifications. If he does not do this he hurts his country, injures, in the long run, the business in which he is engaged, and himself.

Need of Training. Sometimes a man is put into a position which is too much for him. There is danger in this, as well as danger in not giving him proper opportunity. Many men develop under responsibility, and this was illustrated in an interesting incident mentioned recently in the *Railway Age Gazette* in an article called “The Training of Foremen.” Part of it is as follows:

"It has on occasion been remarked, and by men whose opinions in such matters should carry weight, that in order to be a successful executive one must be born with executive ability. We venture to disagree with this statement, while granting that the born executive is likely to prove more successful in the long run than one whose executive ability is the result of training and experience only. A case in point is that of a certain engine-house foreman. The division master-mechanic had never been able to obtain a foreman who could make a success at one of the smaller terminals. There were a number of reasons for this, including bad labor conditions. After several unsuccessful appointments, a young man, then a machinist, was chosen as foreman and sent to this point to 'clean it up,' as the master-mechanic expressed it. He made a dismal failure and had to return to work in the shop. Instead of giving him up as a bad job, the master-mechanic believed that he himself was at fault in starting the man in on a job that was too heavy for him, and a few months later the young man was given an opportunity to show what he could do as an assistant foreman. He filled this position most successfully for some time and succeeded to the foreman's position, but when left thus to his own resources and without the guidance of a foreman over him, he again went to pieces. He was again given an appointment as assistant foreman, and after another two years in this position was promoted to foreman. The experience of being twice set back had taught him his lesson and he is now one of the most successful foremen on this road."

This incident demonstrates that a superior should help a subordinate and not leave him too much alone with a new task. Helpful criticism often aids a man to succeed. Encouragement at the right time is important in an effort to get the best work out of men. It is wise now and then to say, "Well done, thou good and faithful servant."

Twenty Years' Progress. And, again, you are fortunate that you live in the United States instead of in

Europe, where this frightful war is being waged. This war will throw upon this country greater economic burdens and responsibilities than it has ever been called upon to bear. This fact makes more important than ever the loyal, honest, effective work of every citizen of the United States. Consider the growth of the last twenty years, when this country was in competition with all the world:

Population:

1890—62,947,714	Per square mile—21.16
1910—92,174,515	Per square mile—30.99

Wealth:

1890—\$65,037,091,000
1912—187,739,000,000

Bank Clearings:

1890—\$58,845,279,505
1910—159,539,539,000

National Banks:

<i>Number</i>	<i>Deposits</i>
1890—3,484	\$1,521,745,665
1910—7,145	5,287,216,312

Savings Banks:

<i>Depositors</i>	<i>Deposits</i>
1890—4,021,523	\$1,550,023,956
1910—9,142,908	4,070,486,247

Imports: *Exports:*

1890— \$789,310,409	\$857,828,684
1910—1,556,947,430	1,744,984,720

Agriculture:

<i>No. of Farms</i>	<i>No. of Acres of Farm Land</i>
1890—4,564,641	623,218,619
1910—6,361,502	878,798,325

Value of All Farm Property:

1890—\$16,082,267,689
1910— 40,991,449,090

Value of Farm Products:

1890—\$2,460,107,454
1910— 8,498,311,413

Wheat Production:

1890—399,262,000 bushels
1910—635,121,000 bushels

Corn:

1890—1,489,970,000 bushels
1910—2,886,260,000 bushels

Copper Production:

1890—115,966 tons
1910—482,214 tons

Steel Production:

1890— 4,277,071 tons
1910—26,094,919 tons

Gold Production:

1890—\$32,845,000
1910— 96,269,100

Manufactures:

Value of Products:

1890—\$9,372,378,843
1910—20,672,051,870

<i>No. of Wage Earners:</i>	<i>Wages Paid:</i>
1890—4,251,535	\$1,891,209,696
1910—6,615,046	3,427,037,884

Conservation Necessary. The growth of the country in the next thirty years will probably not be as spectacular as during the last several decades. Its development, though, will be steady and will require the help of just such men as you who have been educating yourselves in the theory and practice of your chosen work. The great wealth of the country is in land, in buildings, in machinery, in merchandise and in permanent agencies for the production of wealth and for service to the whole people. The American nation, in the last fifty years, has had such a marvelous growth that certain habits of waste and carelessness have grown up. We must in the future be more careful and conserve in every way the natural resources of the country. We must make use of all by-products in order to care for what we have and thus preserve as much as possible for those who are to come after us.

So the opportunity is here for those who have health, courage, persistence, patience, ability, and, above all, a love for and a willingness to work.

Always Room at the Top. The United States has many men in it who are leaders, who are successful and who began at the bottom of the ladder. You will recall the famous saying ascribed to Daniel Webster—"There is always room at the top."

Take the railroad business, for example. Mr. Alfred H. Smith, President of the New York Central Railroad Company, was formerly a foreman of construction. Mr. E. P. Ripley, President of the Atchison, Topeka and Santa Fe, began as a clerk in the office of the Pennsylvania Railroad in Boston. Mr. Samuel Rea, President of the Pennsylvania Railroad Company, left school at fif-

teen and began in the engineering department of that road. Mr. Daniel Willard, President of the Baltimore & Ohio, was a fireman in Vermont on one of the old wood-burning engines. Mr. James H. Hustis, President of the Boston & Maine, began as a clerk on the New York Central road. Mr. Julius Kruttschnitt, of the Southern Pacific, was an engineer in charge of construction and a roadmaster in his early days. Mr. Marvin Hughitt, of the Chicago & Northwestern, began as a telegraph operator. If you are interested in the one who now addresses you, he began his railroad work as a level rodman in northwestern Missouri at \$15 a month.

**Risen from
the Ranks.**

Mr. James A. Farrell, President of the United States Steel Corporation, began his life's work as a very young lad in a steel wire mill in New Haven. Mr. John D. Ryan, head of the Amalgamated Copper Company, started at the bottom rung in a western mining camp. Mr. Charles M. Schwab worked on a farm and was driver of a coach before he went into the steel business. Mr. Levi P. Morton was the son of a poor Vermont farmer, began work in a country store at fourteen at Enfield, N. H., became one of New York's great bankers, and later was Vice-President of the United States and then Governor of New York. Mr. Thomas A. Edison began at twelve as a train boy and later became a telegraph operator. Mr. Henry Clay Frick was a farmer's boy and later became a clerk and bookkeeper. Mr. John Wanamaker began at fourteen as an errand boy in a book store at a dollar and a quarter a week. Lincoln was a rail splitter, Garfield a canal-boat boy and McKinley a poor farmer boy. Grover Cleveland began work in a law office at \$4 a week. Andrew Carnegie began as a bobbin boy when he was twelve years old for five shillings a week. Later he was a messenger in a telegraph office and from that worked up in the railroad and steel business. George M. Pullman began work on a farm and later was a clerk in a general store. I could add an almost innumerable list of others who, from

very humble beginnings, achieved great success in this land of opportunity.

Choosing the Captains.

The other day the *Worcester Telegram* had an editorial as follows:

"Twenty of the largest railroad systems of the United States have presidents who have been chosen from the ranks within the past ten years. Only two of these are found to have risen because of inherited pull or by the backing of family capital, and these two earned the distinction by personal effort as well as capitalistic power which they heired. That is, they showed the special capacity by activity before being entrusted with the responsibilities. Twenty great industrial corporations which rank in importance with the railroad systems also have chosen new presidents in the last ten years, and only five of these won the distinction by money influence, and these are not presidents because of their inheritance, but because of recognized ability and experience. These incidents mean that the larger industries of the United States are not passed down by families and put under the management of some who have nothing else to do and must have salaries to live on. The captains are chosen on their merits as judged by what they have accomplished. The great majority of them have climbed the ladders from the bottom where they worked as boys. The railroads and the industrial plants have been their colleges, and they have made their diplomas without a technical or a civil service examination."

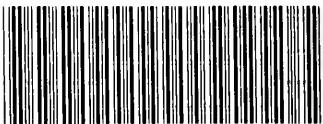
These men accomplished what they did by degrees and by very hard work and by overcoming many obstacles.

There is as much need to-day in the United States, if not more than ever, for men who can make good use of their knowledge of chemistry, electricity, engineering, economical methods and the training of men. After this

dreadful war is over, we shall be in competition again with foreign nations. Some of these peoples have learned to a greater degree than our own people the doctrine of long, hard and persistent work. If we are to compete with the Germans and with the Japanese in their industrial activity, we must be able to turn out as good work as they and turn it out as economically.

New Fields of Opportunity. The transportation business, in which I have been engaged for thirty-five years, has been highly developed in this country. There is yet much to be done in the way of perfecting economies and making savings in that business. Sooner or later, a field will be open here for the development of transportation on the sea, and this will introduce a new opportunity for American talent. If we are to achieve our highest commercial development we must have ships that will carry our products to other countries. The same ability and ingenuity that has developed the wonderful American railway system will, no doubt, in time, develop the American mercantile marine, and this will give work to thousands of intelligent men.

When Opportunity Knocks. John James Ingalls, of Kansas, wrote a sonnet called "Opportunity," and I will read it to you:



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Opportunity will knock at your door some day, and one benefit you should obtain from your training in this school should be the ability to recognize that opportunity and to take advantage of it. I do not feel as strongly as Mr. Ingalls does, that opportunity comes only once, because we know men have tried and failed and then tried again and succeeded. It is, however, most desirable that you should recognize your opportunity and be ready to make the best of it. Just now, when we are in the shadow of this great world conflict, there is another duty that rests upon every American citizen; and that is to hold himself in readiness to come to the support of his country, no matter what crisis may present itself. We do not want war with any nation, but it is no more unwise for this country to prepare itself and be ready for the future than it is unwise for you to prepare yourself to fight the battle of life so that you may be able to care for those who are dependent upon you.



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